

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **Yoshinori MATSUURA et al.**

Serial No.: **divisional of 09/141,140**

Group Art Unit: **1745 (prior)**

Filed: **August 8, 2001**

Examiner: **S. Tsang (prior)**

For: **METAL HYDRIDE ALKALINE STORAGE CELL AND MANUFACTURING METHOD THEREOF**

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

August 8, 2001

Sir:

Prior to calculation of the filing fee and examination of this application, please amend the above-identified application as follows:

CLEAN VERSION OF AMENDMENTS

IN THE SPECIFICATION

Please insert after the title:

This application is a continuation of prior application Serial No. 09/141,140, filed August 27, 1998, which is hereby incorporated by reference.

IN THE CLAIMS

Please cancel claims 1-3 and 8 without prejudice and disclaimer, and amend claims 4-7 and 11, to read as follows:

4. (Amended) A metal hydride alkaline storage cell comprising:

a positive electrode;

a separator impregnated with an electrolyte; and

a negative electrode comprising hydrogen-absorbing alloy powder, wherein said hydrogen-absorbing alloy powder has a layer of hydrogen-absorbing alloy oxide formed on the surface thereof, and a catalytic metal or metal compound is dotted on said layer of hydrogen-absorbing alloy oxide in a granular state by adding a substrate which is soluble in the electrolyte; said substrate being selected from the group consisting of a metal fluoride, a metal chloride, a metal iodide, and a metal sulfide, wherein said metal chloride is a cobalt chloride and/or a nickel chloride; and

the proportion of said substance to said hydrogen-absorbing alloy powder is restricted within the range of 0.1 to 2.5 wt%.

5. (Amended) A metal hydride alkaline storage cell comprising:

a positive electrode;

a separator impregnated with an electrolyte; and

a negative electrode comprising hydrogen-absorbing alloy powder, wherein said hydrogen-absorbing alloy powder has a layer of hydrogen-absorbing alloy oxide formed on the surface thereof, and a catalytic metal or metal compound is dotted on said layer of hydrogen-absorbing alloy oxide in a granular state by adding a substrate which is soluble in the electrolyte; said substrate being selected from the group consisting of a metal fluoride, a metal chloride, a metal iodide, and a metal sulfide, wherein said metal iodide is a cobalt iodide and/or a nickel iodide; and

the proportion of said substance to said hydrogen-absorbing alloy powder is restricted within the range of 0.1 to 2.5 wt%.

6. (Amended) A metal hydride alkaline storage cell comprising:
a positive electrode;
a separator impregnated with an electrolyte; and
a negative electrode comprising hydrogen-absorbing alloy powder, wherein said hydrogen-absorbing alloy powder has a layer of hydrogen-absorbing alloy oxide formed on the surface thereof, and a catalytic metal or metal compound is dotted on said layer of hydrogen-absorbing alloy oxide in a granular state by adding a substrate which is soluble in the electrolyte; said substrate being selected from the group consisting of a metal fluoride, a metal chloride, a metal iodide, and a metal sulfide, wherein said metal sulfide is a cobalt sulfide and/or a nickel sulfide; and
the proportion of said substance to said hydrogen-absorbing alloy powder is restricted within the range of 0.1 to 2.5 wt%.

7. (Amended) The metal hydride alkaline storage cell of claim 4, 5, or 6 wherein said hydrogen-absorbing alloy powder is selected from the group consisting of rare-earth element based hydrogen-absorbing alloy powder, Zr-Ni based hydrogen-absorbing alloy powder, Ti-Fe based hydrogen-absorbing alloy powder, Zr-Mn based hydrogen-absorbing alloy powder, Ti-Mn based hydrogen-absorbing alloy powder, and Mg-Ni based hydrogen-absorbing alloy powder.

11. (Amended) The method of claim 9 or 10 wherein said metal fluoride comprises a compound selected from the group consisting of a cobalt fluoride, a nickel fluoride, an aluminum fluoride, and a copper fluoride.

REMARKS

Claims 4-7 and 9-17 are pending in this application. Claims 1-3 and 8 have been canceled without prejudice or disclaimer, and claims 4-7 and 11 have been amended by this Preliminary Amendment.

A marked-up version showing the changes made by the present amendment is attached hereto as "Version with Markings to Show Changes Made."

In the event that any fees are due in connection with this paper, please charge our Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Version with Markings to Show Changes Made
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VERSION WITH MARKINGS TO SHOW CHANGES

4. (Amended) [The metal hydride alkaline storage cell of claim 1] A metal hydride alkaline storage cell comprising:

a positive electrode;

a separator impregnated with an electrolyte; and

a negative electrode comprising hydrogen-absorbing alloy powder, wherein said hydrogen-absorbing alloy powder has a layer of hydrogen-absorbing alloy oxide formed on the surface thereof, and a catalytic metal or metal compound is dotted on said layer of hydrogen-absorbing alloy oxide in a granular state by adding a substrate which is soluble in the electrolyte; said substrate being selected from the group consisting of a metal fluoride, a metal chloride, a metal iodide, and a metal sulfide, wherein said metal chloride is a cobalt chloride and/or a nickel chloride; and

the proportion of said substance to said hydrogen-absorbing alloy powder is restricted within the range of 0.1 to 2.5 wt%.

5. (Amended) [The metal hydride alkaline storage cell of claim 1] A metal hydride alkaline storage cell comprising:

a positive electrode;

a separator impregnated with an electrolyte; and

a negative electrode comprising hydrogen-absorbing alloy powder, wherein said hydrogen-absorbing alloy powder has a layer of hydrogen-absorbing alloy oxide formed on the surface thereof, and a catalytic metal or metal compound is dotted on said layer of hydrogen-absorbing alloy oxide

in a granular state by adding a substrate which is soluble in the electrolyte; said substrate being selected from the group consisting of a metal fluoride, a metal chloride, a metal iodide, and a metal sulfide, wherein said metal iodide is a cobalt iodide and/or a nickel iodide; and

the proportion of said substance to said hydrogen-absorbing alloy powder is restricted within the range of 0.1 to 2.5 wt%.

6. (Amended) [The metal hydride alkaline storage cell of claim 1] A metal hydride alkaline storage cell comprising:

a positive electrode;

a separator impregnated with an electrolyte; and

a negative electrode comprising hydrogen-absorbing alloy powder, wherein said hydrogen-absorbing alloy powder has a layer of hydrogen-absorbing alloy oxide formed on the surface thereof, and a catalytic metal or metal compound is dotted on said layer of hydrogen-absorbing alloy oxide in a granular state by adding a substrate which is soluble in the electrolyte; said substrate being selected from the group consisting of a metal fluoride, a metal chloride, a metal iodide, and a metal sulfide, wherein said metal sulfide is a cobalt sulfide and/or a nickel sulfide; and

the proportion of said substance to said hydrogen-absorbing alloy powder is restricted within the range of 0.1 to 2.5 wt%.

7. (Amended) The metal hydride alkaline storage cell of claim [1, 2, 3,] 4, 5, or 6 wherein said hydrogen-absorbing alloy powder is selected from the group consisting of rare-earth element based hydrogen-absorbing alloy powder, Zr-Ni based hydrogen-absorbing alloy powder, Ti-Fe based

hydrogen-absorbing alloy powder, Zr-Mn based hydrogen-absorbing alloy powder, Ti-Mn based hydrogen-absorbing alloy powder, and Mg-Ni based hydrogen-absorbing alloy powder.

11. (Amended) The method of claim 9 or 10 wherein said metal fluoride [is] comprises a compound [at least one metal fluoride] selected from the group consisting of a cobalt fluoride, a nickel fluoride, an aluminum fluoride, and a copper fluoride.